

## CLAIMS

## 1. A speaker comprising:

5 a magnetic circuit having a magnetic gap, a top surface, and a bottom surface;

a voice coil body having a bobbin and a coil section, the coil section being movable in the magnetic gap;

a diaphragm of which inner periphery is coupled to an outside of the voice coil body, the diaphragm having a front surface and a back surface;

10 a frame for storing the diaphragm;

a first edge for coupling an outer periphery of the diaphragm to the frame;

15 a suspension holder of which inner periphery is coupled to the voice coil body between the back surface of the diaphragm and the top surface of the magnetic circuit; and

a second edge for coupling an outer periphery of the suspension holder to the frame,

wherein

20 the diaphragm has a bent section between the outer periphery and the inner periphery,

a part from the bent section to the outer periphery is conical, and

the diaphragm is coupled to the suspension holder at the bent section.

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## 2. A speaker according to claim 1,

wherein a part from the inner periphery to the bent section has one

shape of a plane shape, a conical shape, and an inverted conical shape.

3. A speaker according to claim 1,

wherein the diaphragm has the bent section on the outside of a  
5 central part between the inner periphery and the outer periphery.

4. A speaker according to claim 1,

wherein the diaphragm has higher density on the outer peripheral  
side of the bent section than on the inner peripheral side of the bent section.  
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5. A speaker according to claim 1,

wherein the bobbin and the suspension holder are made of metal  
material.

15 6. A speaker according to claim 1,

wherein the suspension holder is made of pulp.

7. A speaker according to claim 1,

wherein the first edge and the second edge are made of urethane.  
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8. A speaker according to claim 1, wherein

the first edge has a shape where the first edge projects toward the  
front surface of the diaphragm, and

the second edge has a shape where the second edge projects toward  
25 the back surface of the diaphragm.

9. A speaker according to claim 1, wherein

the first edge has a shape where the first edge projects toward the back surface of the diaphragm, and

the second edge has a shape where the second edge projects toward the front surface of the diaphragm.

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10. A speaker according to claim 1,

wherein the first edge and the second edge have substantially similar elastic modulus.

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11. A speaker according to claim 1,

wherein a coupling position between the second edge and the frame is set between a top surface position and a bottom surface position of the magnetic circuit.

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12. A speaker according to claim 1 further comprising a dustproof net,

wherein the inner periphery of the dustproof net is coupled to the voice coil body between the suspension holder and the top surface of the magnetic circuit.

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13. A speaker according to claim 1 further comprising another dustproof net, wherein

the frame surrounds the magnetic circuit and has a ventilation hole in a surface facing the bottom surface of the magnetic circuit, and

the dustproof net covers the ventilation hole.

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14. A speaker according to claim 1,

wherein the suspension holder has an opening in one of the top

surface and a side surface.

15. A speaker according to claim 1,  
wherein the top surface of the suspension holder is a corrugation  
5 surface.

16. A speaker according to claim 1,  
wherein the frame has an opening between a coupling section of the  
first edge and a coupling section of the second edge.

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17. A speaker according to claim 1 further comprising an elastic body,  
wherein the diaphragm is coupled to the suspension holder via the  
elastic body.

15 18. A speaker according to claim 17,  
wherein the elastic body is a silicon-based adhesive.

19. A speaker according to claim 1,  
wherein the suspension holder has higher density on the outer  
20 peripheral side of a coupling section between the diaphragm and the suspension  
holder than on the inner peripheral side of the bent section.

20. A speaker according to claim 1,  
wherein the suspension holder has a shape curved in the outer  
25 peripheral direction on the outer peripheral side of a coupling section between  
the diaphragm and the suspension holder.

21. A speaker according to claim 1, wherein

the suspension holder has the outer periphery having a plane section  
and having L-shaped cross section, and

the second edge is coupled to the plane section.

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22. A speaker according to claim 1, wherein

the suspension holder has the outer periphery having L-shaped cross  
section, the outer periphery having a plane section and an erect section, and

the second edge is coupled to the plane section and the erect section.

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23. A speaker according to claim 1, wherein

the second edge has an upper edge section and a lower edge section,  
and

the upper edge section and the lower edge section grapple the outer  
periphery of the suspension holder.

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24. A speaker according to claim 1, wherein

the suspension holder has an L-shaped cross section and has a folded  
section at a tip of the suspension holder.

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25. A speaker according to claim 1, wherein

the diaphragm has a folded section at a tip of the diaphragm.

26. A speaker according to claim 1 further comprising a dust cap,

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wherein the dust cap is coupled to the voice coil body and the  
diaphragm.

27. A speaker according to claim 1,  
wherein the dust cap has a rib, and the rib is coupled to the  
diaphragm.